
Valeriana tajuvensis (Valerianaceae), a New Species from Southern Brazil

Marcos Sobral

Faculdade de Farmácia UFRGS, Ipiranga 2752, 90610-010, Porto Alegre, RS, Brazil.
sobral@vortex.ufrgs.br

ABSTRACT. *Valeriana tajuvensis*, a species from the Serra Geral massif in Rio Grande do Sul and Santa Catarina, Brazil, is described and compared with related Brazilian species of the genus.

RESUMEN. *Valeriana tajuvensis*, especie de las montañas de Serra Geral en Rio Grande do Sul y Santa Catarina, Brasil, es descrita y comparada con las especies brasileñas afines del género.

The last specific study of the genus *Valeriana* in Brazil (Borsini, 1962) listed 15 species, all of them consisting of herbs restricted to the southern and southeastern states of the country and generally collected in montane or submontane habitats.

During recent fieldwork on a montane massif in the southernmost Brazilian state of Rio Grande do Sul, a strikingly distinct, arborescent, and somewhat uncommon species of *Valeriana* was collected; it is described here.

Valeriana tajuvensis Sobral, sp. nov. TYPE: Brazil. Rio Grande do Sul: Tajuva, mun. Morrinhos do Sul (29°21'S, 49°58'W), 19 Aug. 1995 (hermaphrodite fl), J. A. Jarenkow 2708 & M. Sobral (holotype, ICN; isotypes, MBM, PEL, SP). Figures 1, 2.

Species haec *V. polystachyae* et *V. kurtzianae* proxima, a quarum habitus arborescenti, ramificatione sympodialis foliisque apici ramorum aggregatis distincta est.

Gynodioecious shrub 1–3 m high, profusely sympodially ramified, the branches bearing conspicuous leaf scars; canopy 2.5–3 m diam. Leaves opposite, somewhat tufted at the apex of the branches; blades pinnatisect with elliptic-obovate profile, 8.5–18 cm long, 4–7 cm wide, 15–24-lobed (discounting 4–5 strongly reduced proximal lobes at the base of pseudopetioles), the abaxial face very sparsely glandular-punctate, the glands less than 0.1 mm diam., lobes with the margin slightly revolute, unequal in size, the 4–5 proximal pairs at the base of the pseudopetioles (1–)3–10 mm long, (0.3)1–1.5 mm wide, the others 30–45 mm long and

4–5 mm wide, markedly asymmetrical, the terminal 30–40 mm long and 3–3.5 mm wide, symmetrical; pseudopetioles 4–15 mm long, each pair of leaves connected at base forming a continuous nodal sheath. Inflorescences paniculiform with the final units dichasial, in hermaphrodite plants 20–30 cm long and 10–15 cm wide, in pistillate ones 15–20 cm long and 5–8 cm wide, due to the reduction of secondary ramifications (paracladia sensu Larsen, 1989); proximal bracts similar to leaves, about 6 cm long and 3 cm wide; distal bracts simple and lanceolate, 8–10 mm long and 1–1.5 mm wide; bracteoles lanceolate, 1.5–1.8 mm long and 0.5 mm wide, sometimes with sparse tufts of hairs 0.1 mm long in the base. Flowers sessile, pentamerous, the calyx with 4–5 loosely distinct to completely fused segments, forming a hyaline ring 0.2–0.4 mm high; corolla white, campanulate, with straight tube. Hermaphrodite flowers with corolla about 2 mm long and 2 mm wide, lobes 0.8 mm long and 0.6–0.7 mm wide; stamens attached at about the middle of the corolla, 2–4, generally 3, exserted, filaments about 2 mm long, anthers 2-lobed, globose, the locules in a same anther slightly unequal, about 0.3 mm long; style included, about 1 mm long, stigmas 3, 0.2–0.3 mm; ovary inferior, triquetrous in shape, filled with parenchymatous tissue, unilocular, uniovulate; ovule pendulous. Pistillate flowers with corolla 0.5–0.8 mm long and 0.5 mm wide, the lobes about 0.3 mm long and wide; stamens 3, included, 0.2–0.3 mm long, anthers globose with somewhat unequal locules, about 0.2 mm long, not producing pollen in the flowers examined; style 1.3–1.5 mm long, stigmas 3, exserted, 0.1–0.2 mm long; ovary the same as in hermaphrodite flowers. Fruits triquetrous, asymmetrical in transversal view, 2–2.3 mm long and 1.1–1.3 mm wide, uniseminate, sparsely pilose, eventually somewhat more densely so at the edges. Seeds examined immature.

Arborescent species of *Valeriana* are quite common in the Andean highlands of Colombia, Peru, and Venezuela (Killip, 1925, 1928; Cuatrecasas, 1941; Xena, 1992), the region where *Valeriana* at-



Figure 1. *Valeriana tajuvensis*. Branch of hermaphrodite plant, drawn from holotype (Jarenkow 2708).

tains its highest diversity in the Neotropics (Meyer, 1951). Nevertheless, woodiness was not known in eastern South American species (Müller, 1885; Borsini, 1962, 1963).

The leaves of *V. tajuvensis* resemble those of

southern Brazilian and Argentine *V. polystachya* and *V. kurtziana*, but it may be distinguished from these two species by the following characters:

Habit herbaceous, sometimes rhizomatous, never

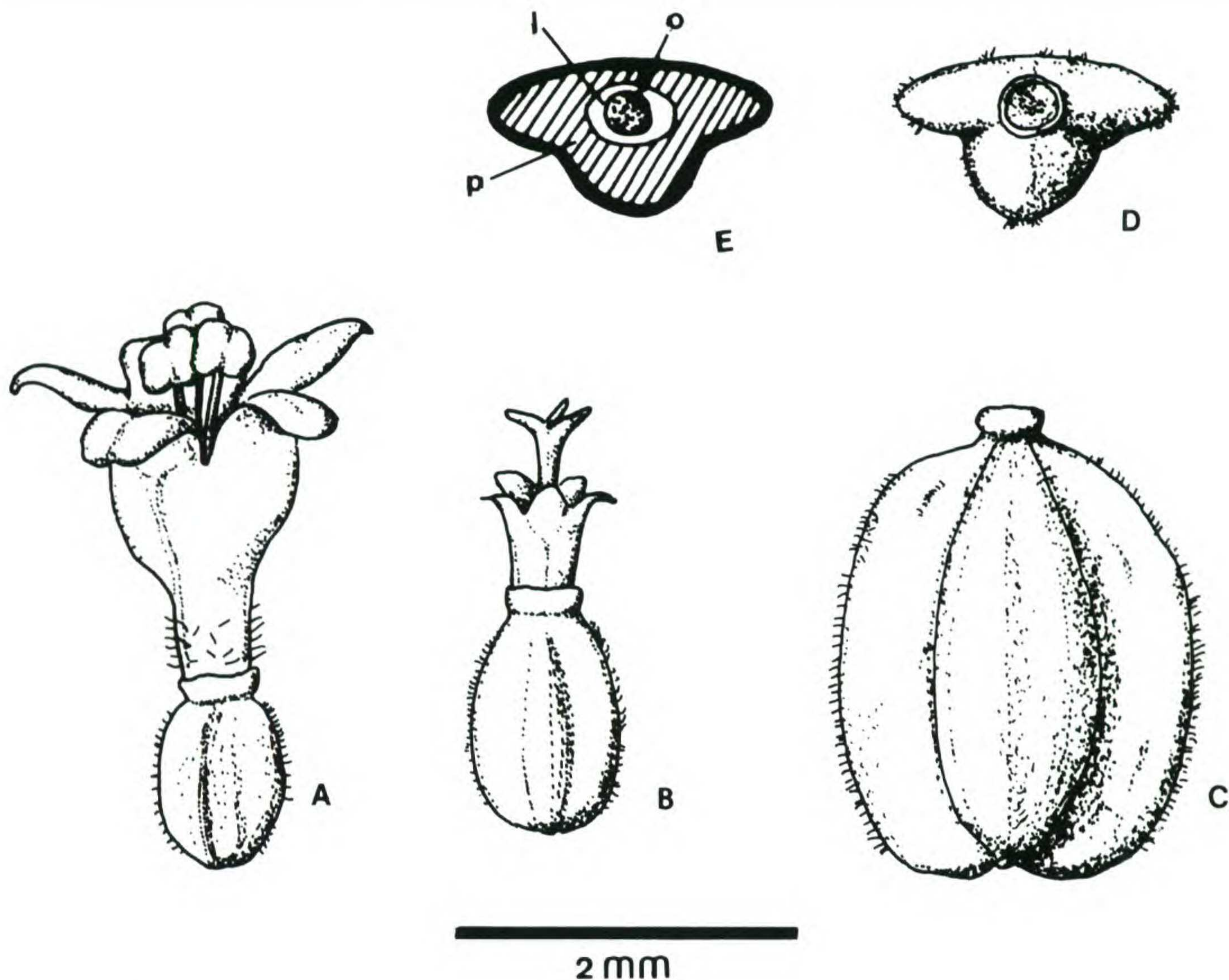


Figure 2. Flowers and fruits from *Valeriana tajuvensis*. —A. Hermaphrodite flower (Jarenkow 2708). —B. Feminine flower (Jarenkow 2706). —C. Fruit in frontal view. —D. Fruit in apical view. —E. Immature fruit, transversal section, schematic: l = locule, o = ovule, p = parenchymatous tissue (C–E, Sobral 7945b).

woody; ramification monopodial; leaves equally distributed along the entire plant

. *Valeriana kurtziana* and *V. polystachya*

Habit arborescent, woody, never rhizomatous; ramification sympodial; leaves concentrated at the apex of the branches *Valeriana tajuvensis*

Phenology. Flowering and simultaneously fruiting specimens were collected in July, August, and December.

Distribution. The species has been collected in Serra da Tajuva, in the state of Rio Grande do Sul, and Serra do Faxinal, state of Santa Catarina.

Ecology. Heliophilous and subxerophilous shrub growing on the eastern slopes of the southern Brazilian massif named Serra Geral, at altitudes between 500 and 700 m above sea level; at the collection site in Tajuva, it occurs either sporadically at the edge of submontane forests or in great densities of hundreds of individuals in more openly insolated and well-drained rocky fields; at Serra do

Faxinal only two individuals were observed on a rocky roadside (Falkenberg, pers. comm.).

Paratypes. BRAZIL. **Rio Grande do Sul:** Serra da Tajuva, municipality of Morrinhos do Sul (29°21'S, 49°58'W), July 1995 (pistillate), Sobral 7934a (ICN), July 1995 (hermaphrodite), Sobral 7934b (ICN), Aug. 1995 (pist.), Sobral 7945a & Miró (ICN, RB), Aug. 1995 (herm.), Sobral 7945b & Miró (ICN), Aug. 1995 (pist.), Jarenkow 2702 & Sobral (ICN, MBM, PEL), Aug. 1995 (pist.) Jarenkow 2706 & Sobral (FLOR, ICN, MBM, PEL, RB, SP), Dec. 1995 (pist.), Sobral 8010 & Jarenkow (FLOR, MBM, MO). **Santa Catarina:** Serra do Faxinal, municipality of Praia Grande, Mar. 1997 (herm.), Falkenberg 9797 (FLOR).

Acknowledgments. I am grateful to Ângela Ribeiro and Paulo Hafner for introducing me to Serra da Tajuva; to Cíntia Miró and João André Jarenkow for their kind and valuable help with the collections; and to Daniel B. Falkenberg and Donna M. E. Ware for keen and useful observations on the manuscript.

Literature Cited

- Borsini, O. E. 1962. Revisión de las valerianaceas de Brasil. *Lilloa* 31: 149–170.
- . 1963. Valerianaceas del estado de Santa Catarina (Brasil). *Sellowia* 15: 123–136.
- Cuatrecasas, J. 1941. Notas a la flora de Colombia, IV. *Revista Acad. Colomb. Ci. Exact.* 4: 337–348.
- Killip, E. P. 1925. Twelve new species of *Valeriana* from the Andes of South America. *J. Washington Acad. Sci.* 15: 450–456.
- . 1928. Seven new species of *Valeriana* from Colombia and Peru. *J. Washington Acad. Sci.* 18: 498–501.
- Larsen, B. B. 1989. A taxonomic review of *Phyllactis* and *Valeriana* sect. *Bracteata* (Valerianaceae). *Nordic J. Bot.* 6: 427–446.
- Meyer, F. 1951. *Valeriana* in North America and the West Indies (Valerianaceae). *Ann. Missouri Bot. Gard.* 38: 377–485.
- Müller, C. A. 1885. Valerianaceae. *In*: K. Martius (editor), *Flora Brasiliensis* 6(4): 339–350.
- Xena de Enrech, N. 1992. Valerianaceae. *In*: *Flora de Venezuela* 5(1): 221–267.